THE SUBPRIME CRISIS AND THE EUROPEAN BANKING SECTOR: THE RENEWAL OF UNIVERSAL BANKS?

Elisabeth Paulet*
ESCEM - Ecole Supérieure de Commerce et de Management,
Tours-Poitiers, France

Abstract
Since the 90's, European banks have sustained numerous structural disturbances. Their degree of integration combined with the universality of our institutions in the banking sector may then be an important factor to take into account in appreciating its resistance to systemic shocks. In this first part, the correlation between size and systemic risk will be discussed. The current financial deregulation has permitted the entry onto the market of institutions, which are traditionally non-banking institutions (insurance companies, institutional investors, pension funds). It would be interesting to measure the influence of these newcomers on the evolution of banking integration. This is the object of part two of this analysis. The last stage will consist in an attempt to evaluate the systemic risk in the framework of the new financial environment. The subprime crisis and the unequal reaction of banking institutions will lead us to two questions: "Will this crisis lead to a renewal of the predominance for universal banks?" and "Will the new process of integration in banking sector guarantee stability at the international level?"

Keywords: crisis, universal banks, size, efficiency, globalization

JEL Classification: E51, G21, G24

Introduction

Since the 90's, banks in Europe have sustained numerous structural disturbances. The trend toward institutions which are primarily universal in their function is an illustration of these transformations. These changes have led to instability factors known as systemic risk. Why does systemic risk emerge? How can this concept be defined? Michel Aglietta (1991) delimits this new phenomenon by "the possibility for an economy that situations arise in which the response on the part of agents to the risks they perceive, far from leading to a better distribution of individual risks (through an insurance process for example) lead to a

* Author's contact: e-mail: epaulet@escem.fr

rise in overall insecurity".

The degree of integration in the banking sector may then be an important factor to take into account in appreciating its resistance to systemic shocks. Indeed, it may constitute a factor of vulnerability, inasmuch as the possible failure of a very large institution would have considerable repercussions on the entire financial system. Combined with the universality of our institutions, this parameter can only grow in its scope. In this first part, the correlation between size and systemic risk will be discussed. The second objective of the analysis will be to measure the capability for universal banks to face systemic shocks. By comparing their structure and activities, the conclusion could lead to a better diversification in their risk management. The last stage will consist in an attempt to evaluate the systemic risk in the framework of the new financial environment. The subprime crisis and the unequal reaction of banking institutions will lead us to two questions:

- Will this crisis lead to a renewal of the predominance for universal banks?
- Will the new process of integration in banking sector guarantee stability at the international level?

1. The unresolved issue of the correlation between size and the increase of systemic risk: the size-efficiency ratio

1.1 Methodological difficulties

The examination of the banking strategies in Europe and in the United States reveals the growth in the size of the network, and portrays integration movements as the two axes which structure the policy of penetrating new market segments. The issues of market structure and the possible optimal size of a firm are therefore on a par with a bank's activity. Numerous studies devoted to economies of scale have endeavored to highlight an optimal size or, at least, to prove the existence of a decrease in efficiency beyond a certain threshold. Relying on a study of the properties of the average cost curve, it shows that this curve presents the usual U-form (which reflects first increasing returns of scale and then decreasing), and that the optimal size of the firm corresponds to its minimum.

In the banking sector the notion corresponding to economies of scale is therefore "joint production". Indeed, such economies may be realized each time that certain inputs are used with no additional cost, in order to produce goods other than those originally manufactured. In other words, we shall refer to economies of scale when, at a given level of production, the costs corresponding to a joint production process are lower than those resulting from the sum of the costs associated with independent production processes.

The application of these notions to banking strategy raises certain difficulties, however. The main problems stem from the lack of any definition on the unanimously accepted role played by the banks in the intermediation process. Consequently, no generally accepted model exists representing the bank production process. The reserves expressed with respect to the different representations of the bank's production or cost functions have a twofold origin. The first is circumstantial and lies in the diversity of existing regulatory frameworks, and the effects they have on the banking strategy and the functioning of

markets, while the second, more fundamental, is the strong similitude between banking inputs and outputs (always monetary and financial assets) [1].

Lastly, additional difficulties stem from the multi-product nature of banking firms. This issue, largely debated since the advent of the theory of contestable markets at the beginning of the eighties[2], has not been exhausted. Indeed, the use of the balance sheet items, incorporated in the framework of financial ratios or considered individually, does not permit the expression of output in physical terms. Moreover, the development of activities outside the current balance-sheet which generate revenue for banks (but are excluded by the usual accounting procedures) makes it difficult to characterize the bank's production function. It appears that another approach must be sought in the use of proxy variables such as the number of accounts managed. Nonetheless, this type of solution comes up against practical constraints linked to the difficulty collecting sufficiently extensive and homogeneous data.

Thus, a twofold debate structure the literature devoted to the bank development in the industrial economy approach. The first facet, concerning the economic definition of the banking firm, strives to decide between an approach in production terms and a more recent analysis emphasizing intermediation. The second facet, of a technical nature, concerns the specification retained for the cost function, as the form chosen[3] impacts the evaluation of indicators of economies of scale and scope. The theoretical underlying option retained in the various econometric studies available therefore influences the results obtained considerably, as we shall demonstrate in the following paragraph.

1.2 Highly equivocal empirical studies available

The strategies adopted by banks such as Barclays, National Westminster or Dresdner in an attempt to reach a dominant position on the European market and protect themselves effectively against new competitors on their respective national markets, are marked by a

[1] For example, deposits may also be considered as inputs or outputs depending on whether we perceive banks as institutions which transform claims into assets presenting varying degrees of risk and liquidity or, in a more conventional manner, as firms for which deposits, like work and capital, are considered as resources.

[2] We recall that in the case of a multi-product industry, Baumol, Panzar and Willig (1988) showed that if a sustainable allocation exists, it necessarily meets the five following conditions: 1) the industry minimizes costs, 2) each company achieves a profit level which is null (the firm's equilibrium), 3) revenue made on a sub-set of products amounts at least to the savings made if the firms did not produce these goods, 4) the prices of the products are equal to the marginal production costs and 5) when barriers to entry exist, the sustainable prices are equal to the marginal cost weighted by the factor of the elasticity of demand for the product (pricing at the Ramsey price).

[3] The two most frequently encountered forms are the Cobb-Douglas function the advantage of which is its ease of use but which, due to the fact that it is limited by assumptions of the invariability of scale productions compared to the level of output and mono-production, is increasingly replaced by a trans-logarithmic function such as:

$$\text{Log } C = Y_0 = \alpha \text{ Log } Y + \beta (\text{Log } Y)^2 + \sum_i \beta_i \text{ Log } \omega_i \text{ Log } Y + \sum_{ij} \gamma_{ij} \text{ Log } \omega_i \text{ Log } \omega_j$$

belief that they can benefit by increasing their size which implies the reduction of costs[4]. (Figure no. 1)

Increase in size ⇨	- better gathering of information - computerization ⇨	Economies of scale: - specific to a product - depending on banking firm.
	- risk diversification - effect of notoriety	Economies of variety: - global (cost of joint production < Σ of costs in case of separate production), - specific to the product (the product costs less when it is manufactured at the same time as other products)

Figure no. 1: Impact of size on economy of scale and scope

The empirical tests, which constitute the basis for adopting such strategies, are constructed considering cost functions in which the exogenous variables are the price of production factors, the level and composition of output. The functional relationship on which they rely is a direct derivative of standard micro-economics given that it consists in pointing out a link between cost and the production function. For years, the search for satisfactory production functions mobilized authors who conventionally turned to the standard Cobb-Douglas form which they abandoned progressively due to the restrictive assumptions underlying it.

The empirical studies on economies of scale and scope in the banking sector focus in particular on the construction of cost curves specific to the various institutional categories of establishments in an effort to appreciate the extent to which an increase in size can contribute to reducing total costs. Up to now, the efforts made in this line of research have not produced unequivocal results and have failed to eliminate certain assumptions once and for all. More precisely, the results differ greatly depending on whether the banking firms are considered as mono- or multi-productive.

[4] We note that in numerous cases this tendency was promoted by the Public Authorities and the central banks convinced of the principle of "too big to fail" as a means of reducing the systemic risk while not accentuating their role as lenders of last resort. (see Roth, M. (1994): Too Big to Fail and the Stability of the Banking System: Some Insights from Foreign Countries *Business Economies*, Vol. 29, Leaflet 4, pp. 43-49).

The studies which rely on mono-product functions lead to the existence of significant economies of scale, while more recent research which considers the banking firm as a multi-productive entity shows that the increase in returns linked to the growth in the size of the firm is perceivable only in small establishments. Beyond a certain threshold, the increase in output is reflected, on the contrary, in a drop in performances. Although this type of result indeed confirms the existence of a minimum scale of efficiency, it does not allow us to close the debate on the possible existence of economies of scale in the banking sector once and for all.

With respect to the European area, the various analyses proposed (cf. Canals, J. (1993); Dietsch, M. and L. Weill (1996)) do not succeed in pinpointing the existence of a stable, pre-determined relation between the various classes of size and the degree of diversification of the activity in the various banking establishments studied. These results lead them to the conclusion that no optimal size, or optimal combination or line of financial products exists, at least in the case of France. This conclusion is confirmed in their study of the Belgian banking system, which permits them to demonstrate that the largest establishments sustain diseconomies of scale. We find the same confusion on the Italian level. Indeed, certain studies mention significant cost cuts negatively correlated to the average growth size of banking establishments: this means that the effective size of Italian banking establishments is noticeably lower than their optimal size. Other authors distinguish enterprises and establishments. They report on the existence of increasing scale returns each time the increase in the level of output is followed by the stability of the number of branch offices composing the network. On the contrary, considering a variable number of bank offices, the economies of scale then benefit only small and middle-size establishments. As usually admitted, it is possible to infer that as such the banking network is operated in a sub-optimal manner: an increase in the size of the branch offices would make it possible to derive benefit from a drop in costs, and consequently to enhance profitability.

The limited relevance of variables reflecting scale effects in the cost or production functions, except at low output levels, raises numerous questions about the effects to be expected of integration in the banking sector[5]. In fact, it appears that, like for any other type of activity, banking can also generate increasing scale revenues whenever high establishment costs or indivisible inputs exist. Similarly, the profits associated with an increase of size for a firm can be the result of organizational factors (better production management), a better competitive position (reductions or payment delay granted on the purchases of large quantities of inputs) or the incorporation of a technical progress.

We witness a similar debate in the case of economies of variety on which the defenders of the universal bank rely to report profits correlated with a multi-product firm. Thus, numerous French banks have opted for the diversification scenario without valuable proof of the existence of profits due to broader product lines.

The various studies mentioned up until now appear to totally pave the way in the search for efficiency in the banking sector. And yet, the absence of a unanimously accepted approach combined with environmental changes seems to leave the necessary leeway for performing additional research. This is indeed the perspective of the next section, which is aimed at

[5] The main effect of economies of scale appears to be the erection of barriers to the entry of new competitors on the banking market.

casting new light on the issue of the relationship between performances and the universality of banking firms.

2. Universality and systemic risk

I. Walter (1997) in a paper entitled: 'Universal banking: A Shareholder value' distinguishes four types of banking structure:

- totally integrated universal banks which provide a broad sampling of financial services (banking services, securities and insurance) in a single corporative structure supported by a unique social capital. So far, no good example of this model exists;
- partially integrated banks which conduct both commercial and investment activities in a same entity, but which distribute insurance, provide consulting and specialized services through separate branches, either because these services are subject to different regulations, or because they may be at the source of conflicts of interest requiring special management. The Deutsche Bank AG constitutes a good example of this type of organization;
- commercial banks whose principal operations consist in collecting deposits and granting loans and subsidiary in providing financial activities ranging from investments to insurance contracts. Barclays Bank Plc is an illustration of this model;
- holding companies which control affiliated companies performing all sorts of commercial, investment, insurance activities as well as a great number of operations which can be financial or not. Examples can be found through J.P. Morgan and CS Holding.

Why then to return to the various forms of universalism in a context of systemic risk? To return, in order to justify their capacity of resistance to shocks. Numerous authors have considered that the introduction of financial economies of scale induced a reduction of risks. In fact the effect of economies of scale varies according to the initial structure of the banking system. The greater the bank share on the banking market for deposits and loans, the higher the intermediation margin (the difference between the rates at which the bank remunerates itself and that at which it refinances itself). This constitutes one of the specificity of universal bank activities. Traditional large commercial banks' balance sheet can be characterized by the following equation:

Liabilities clients transactions (deposits) - Asset clients transactions (loans) < 0 (1)

In addition their off balance sheet is much larger than their balance sheets (sometimes more than 20 times the total assets as for the BNP Paribas)

In a situation of weak competition, each bank will have a tendency to use its market power to increase interest rates on loans and to reduce those remunerating deposits. Thus the more concentrated the system, the more capable it is of generating high profits. In short, an increase in size does not necessarily entail an increase in financial profits. The theoretical analysis relies more on the relation between size and banking cost than on banking structure to explain the efficiency of banking institutions. The core of the argument is based on the

capacity of diversified banking institutions to acquire the information necessary for maintaining their solvency. The ensuing cost is lower for universal banks than for specialized establishments due to the role of economies of scale from which they benefit due to their size.

In that context, how can we describe the activities of an investment banks and their profit margin? Most clients of investment banks are big enterprises and financial institutions: they bring their liquidity to the investment bank (deposit side), the bank offers access to equity capital markets, debt capital markets (financial participation and syndicated credit). Their off balance sheets are less important than a universal bank as most derivative products are part of their core activities and included in the balance sheet. This explains their sensibility to the subprime crisis. Does this statement justifies an argument in favour of universal banks and integrated banking system? In a European context, the differences of profit between specialized establishments and universal banks are much less significant. In particular, debt contracts do not reflect a considerable differentiation of interest rates as we might have expected. Moreover, O. Pastre (2001) mentions that the existence and the development of small size banking structure are possible under six basic conditions:

- prohibition to practice in activities where economies of scale are important;
- specialization is compulsory;
- flexibility is required;
- control of the level of risk is necessary;
- cooperation has to be developed;
- margins must not be sacrificed.

Therefore, universality could only be an advantage as regards risk management. Hence, O. Pastre's hypotheses for a development of small size seem difficult to reach in a context where cooperation is rare and integration is increasing. Our next step will be then to exhibit that, considering the evolution of financial markets, universal banks are more adapted for financing managerial projects.

3. Banks and Subprime crisis: a challenge for more efficiency in the globalization context

3.1 Banks and financial markets in a crisis context: competition or cooperation?

Over the last years, *capital markets* have been used differently in the USA and in Europe as regards the financial policy for firms. Up to 2000, the firms have increased their use of financial markets in comparison to banks. In the United States, the main actors (the NYSE for mature firms and the NASDAQ for companies in expansion) are clearly identified. In Europe, a large number of financial places still exist. The most important one as regards capitalisation (e.g. table no. 1) is the London Stock Exchange followed by Euronext. Moreover the number of listed companies is not comparable to the figure given for American firms. Enterprises rely more on credit banking than on stocks for the financing of

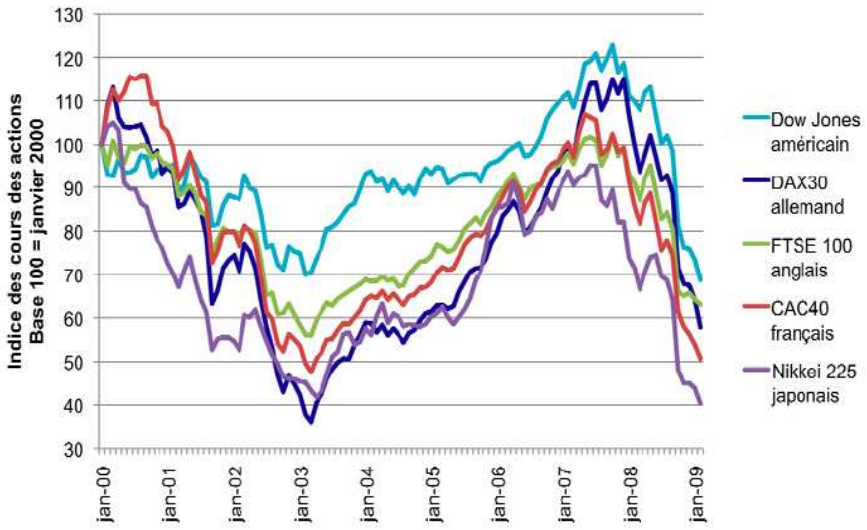
their project (e.g. Paulet 2003). Except for the case of United Kingdom where the financial markets are very developed (since the nineteenth century), French and German companies finance their project through banking credit. Even if the beginning of the millennium has experienced an increase of markets as regards financial policy for firms, the successive speculative bubbles have not confirmed this movement. On the contrary, in countries where universal banks are dominant (like Germany), banks have recovered their place. For other partners, the structure of industry where small and medium size enterprises (SME) represent 80% of all companies could justify the choice in favour of banks for their investment projects.

Table no. 1: Major actors of financial sector: spot market (31/12/2002)

	Capitalisation (in billions)	**Number of listed companies**
NYSE	8654	2366
Tokyo stock exchange	1986	2153
Nasdaq	1915	3649
Euronext	*1477*	*1484*
LSE	1708	2824
Deutsche Börse	658	934

Source: Euronext, LES, FESE, FIBV

The financial integration has been a factor of rapid transmission of crisis. The financial crisis has extended to real world. Hence, enterprises and agents have assisted to a significant decrease of their profit and revenue. They have become more and more cautious, inducing a contraction of consumption and investment. Hence, negative expectations are reinforced by the general context of uncertainty as regards the solvency of banks and the magnitude and length of recession. The consequence is the volatility of the financial markets as exhibited by figure no. 2: the major financial indices are broken down up to 38% (FTSE 100) and 58% (Nikkei) between June 2007 and February 2008.



Source : Eurostat

Figure no. 2: Fluctuations on financial markets (2000-2008)

At the same time, banks have then become more vulnerable. The monopolies coming from the merger acquisitions in that sector have been undermined by the penetration onto the market of new suppliers of financial services. This has had consequences both on the level of the prices at which the banking products are supplied and on that of their profit margins. The enormous increase of derivatives and the role played by off balance sheet items have generated instability for the banking system. The subprime crisis illustrates perfectly this point by giving evidence that specialized institutions like investment banks have used securitization process to transform non performing loans into junk assets. The inter-connection among institutions and financial markets has contributed to the transfer of systemic risk from United States to Europe. However the particularities of banking structures in Europe (more oriented towards universal banks) is a factor of explanation of the difference of magnitude of the financial crisis between these parts of the world.

Size has been a continuous preoccupation over the last twenty years. Its measure has even changed. In the old standard, total assets were often used to evaluate the size of an institution. Now market capitalization and adequacy of bank capital on a risk adjusted basis are privileged. The new crisis context makes us guess that the integration trend (which had decreased over the last decade) will again be considered as an efficient tool to avoid banking run. Hence, as the inter-connection of financial markets accentuates contagion phenomena, the next question therefore is threefold:

- Is it possible to evaluate and prevent the systemic risk in our global banking system? Is integration the unique tool to avoid banking crisis?

- Does the actual crisis appeal to new considerations as regards the core business of a banker in the XIX century?
- Could European prudential agencies have a leader role in that process?

These are the questions we intend to discuss now.

3.2 Banks and Subprime crisis: a challenge for more efficiency in the globalization context

Let us first recall the core factors which describe the subprime crisis. First, the crisis has led to a mortgage bubble in the United States. This has affected of course mortgage companies but also specialized investment institutions and partly universal banks. Third, it has induced a global liquidity crisis both in the States and Europe. Fourth, the collapse of structured investment products derived from the affected assets shifted the global liquidity into commodity futures. The aim of this section is to evaluate the magnitude of this crisis of European and American banks.

One cannot doubt that banks bear a large responsibility of the actual financial situation. They were perfectly aware of the nature and the extent of the continued exposure to their off balance risk and their asset based securitization (ABS) they carried on their balance sheet. The explosion of these new products and these new actors as discussed in the previous paragraph has contributed to increase the global level of risk and to the emergence of systemic risk. This excessive disintermediation and the large amount of liquidity on the market could then be considered at the origin of the global financial crisis that affected both banking institutions and financial markets.

Academic researchers and professional financers agree to consider investment banks as originators of the crisis. Our purpose is to support the argument that universal banking model is more resilient to face the current situation. Buiter (2007) affirms that universal banks have a wider variety of assets than investment banks, which allows them to spread the credit risk across a broader range of asset categories. Despite the fact we share this position, it cannot be denied that large universal banks such as Société Générale, UBS, BNP Paribas, and Crédit Suisse among others have shown large losses stemming from their vast exposure to risky mortgages and derivatives securities. Several arguments can be addressed to undermine this situation.

As mentioned by the actual president of the Deutsche Bank, Mr Banziger, more diversified banks are better able to solve their own problems in crisis time. They can provision liquidity to support eventual losses. Their balance sheets encompass earning streams and they raise funds in both wholesale and retail markets. Hence, the diverse sources of earnings ensure that losses in one area can be offset with other gains in functional areas. The results will lead to reduce their annual profit but to avoid liquidity or solvency difficulties.

Second, bigger banks not only enjoy the advantage of diversity but also have much more scope to sell off assets in time of trouble. American investment banks were not sharing this situation. Their asset-to-equity ratios prevent them from a rapid de-leveraging in case of serious financial crisis (e.g. Table no. 2)

Table no. 2: Expanded leverage asset-to-equity ratios

	2005	2007
Bear Sterns	26	33
Morgan Stanley	31	33
Lehman Brothers	25	31
Merill Lynch	18	28
Goldman Sachs	25	27

Third, universal banks seem to be more efficient to restore capital ratios to more reasonable level. Those which were not capable of reacting promptly have been absorbed by stronger institutions (e.g. BNP Paribas – Fortis). Hence, one may expect a new wave of mergers or acquisitions of commercial banks by better capitalized investment banks once their write downs are completed. Then the concentration process and the methodological difficulties to identify real universal banks are going to become more crucial in the following years. As discussed previously, if integration could be in the first stage a guarantee to avoid solvency problems, it is not without influence on the existence of systemic risk for the global banking system. To prevent such a situation to occur, a solution could be a better transparency of balance sheets of banks and more specifically their practice of risk transferring to derivative products.

Fourth, the situation is not uniform in whole Europe. The banking systems of Eastern countries are more vulnerable than the ones of the Euro Zone. Three main reasons can be found:

- a high penetration of foreign banks (which represent in average 70% of the whole banking system; while facing solvency difficulties, the first reactions of these institutions have been to recall their funds in their home countries;
- a depreciation of their currencies: hence a currency crisis must be added to the financial one (cf. Figure no. 3);
- a decrease of the foreign direct investment, which constitutes a strong support to their economic growth.

Figure no. 3: Currency risk in Europe

Source: Eurostat and Jean François Jamet and Frank Lirzin (2009)

Hence, the subprime crisis has then shown the fragility and inequality of European banking system. As far as the Euro zone is concerned, the last crisis has induced a reinforcement of universal banks and the new trend of merger and acquisitions. This last factor, if efficient in a first step to reduce systemic risk, could later on lead to more instability: a risky attitude of a huge institution could oblige central authorities to intervene according to the 'Too big to fail' principle. For Eastern countries, the question is even more delicate: this crisis has pointed out the necessity to build up a banking system based on domestic roots. This will imply time and a real implication of national authorities. In doing so, the foreign institutions will reinforce local banks and not substitute them. The second point concerns an acceleration of monetary integration in order to reduce the impact of currency fluctuations.

As a whole the actual situation could be a good measure of the lack of integration of our banking institutions, the progress that have to be done to restore solvency and stability for both banking systems and financial markets.

Conclusion

As regards our previous discussion, the new banking model for XXI century should refocus on the collect and the distribution of long term lending and retail activities. The current crisis has shown that the transfer of debt into financial market can lead to an increase of risk not only for the institution itself but also for their financial partners. Hence, the new

model could contribute to renewal of universal banks, which consider retail banking as their core business. Their ability to diversify risk and to respect more carefully capital adequacy are the main factors to justify such a position.

References

Aglietta, M., 1991. Le risque de système. *Revue d'Economie Financière*, 17, automne, pp 61-89.

Aglietta, M. & Moutot, P., 1993. Le risque de système et sa Prévention. *Cahiers Economiques et Monétaires,* 41, pp. 21-81.

Aglietta, M., 1999. A Lender for Last Resort for Europe. *CEPII Document de Travail*, pp. 99-12.

Altunbas, Y., Molyneux, P. & Evans, L., 2001. Bank Ownership and Efficiency. *Journal of Money, Credit and Banking*, Vol. 33, no. 4, pp. 926-953.

Altunbas, Y., Molyneux, P. & Thornton, J., 1997. Big Banks Mergers in Europe – An Analysis of the Cost Implications. *Economica*, 64, pp. 317-29.

Ayadi , R. , de Lima, P. & Pujals, G., 2002. Les Restructurations Bancaires en Europe. *Revue de l'OFCE*, Mars 2002, pp. 325-382.

Battalio R., 1997. Third Market Broker-Dealers: Cost competitors of Cream-Skimmers?. *Journal of Finance*, 52(1), pp. 341-352.

Baumol,W.J., Panzar J.C & Willig, R.D., 1988. *Contestable markets and the theory of industry structure*. Harcourt Brace Javanovich, New York

Buiter, W.H., 2008. Lessons from the North Atlantic financial crisis. *Working paper, LES, Universiteit van Amsterdam, CEPR and NBER*, no. DP6596

Canals, J., 1993. *Competitive Strategies in European Banking.* Clarendon Press, England.

Dietsch, M. & Weill, L., 1996. Banking Efficiency and European Integration. *7th Symposium on Finance Bank and Insurance, Karlsruhe*

Jamet, J.F. & Lirzin, F., 2009. L'Europe à l'épreuve de la récession. *Fondation Robert Schuman, Question d'Europe*, 130, pp. 1-26.

Levratto, N. & Paulet, E., 1997. La taille de la Firme Bancaire peut-elle être considérée comme facteur d'efficience. *Journée GdR sur "La firme bancaire: spécificités et enjeux" organisé par Université d'Evry-Val d'Essone (EPEE) et Paris XIII CEDI.*

Orlowski, L.T., 2008. Stages of the Ongoing Global Financial Crisis : Is there a Wandering Asset Bubble. *IWH Diskussionspapiere*, no. 11, September 2008.

Pastre, O., 2001. Industries Bancaires: les Espoirs des Davids face aux Goliaths. *Revue d'Economie Financière*, 61, pp.53-62

Paulet, E., 1996. Universal banks and the European Banking System: Prospects and Problems. *EUI Working Papers*, 54, pp. 1-34.

Paulet, E., 1998. Alternative Banques Universelles - Banques Spécialisées dans le système bancaire Européen. In J. Spindler , dir. *Contrôle des activités Bancaires et Risques Financiers*, Paris , *Economica*, pp. 45-71.

Paulet, E., 2003. La structure financière des entreprises en Europe: une investigation

empirique de la neutralité du bilan. *Economie et Prévision*, 2003/1, 157, pp. 71-83

Paulet, E., 2005. European Banking: Historical Roots and Modern Challenges Hermes Science.

Peterson, M. et. Sirri, E., 2003. Order Preferencing and Market quality on US Equity Exchanges. *Review of Financial Studies*, 16(2), pp. 385-415.

Sabourin, D., 2004. Competition between Alternative Trading Mechanisms' Mimeo

Walter, I., 1997. Universal Banking: A Shareholder Value. *European Management Journal*, Vol 15, no. 4, pp. 344-360.